UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,623	02/11/2002	Mark N. Robins	10018045-1	4533

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EXAMINER
NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/073,623	ROBINS ET AL.
	Examiner	Art Unit	
	LUONG T. NGUYEN	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 November 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 11/22/2006 have been fully considered but they are not persuasive.

In re pages 7-8, Applicant argues that Needham does not disclose determining "if motion .between said second image and said first image is below said at least one predetermined motion threshold and store said second image as a final image if the motion between said second image and said first image is below said at least one predetermined motion threshold," as is required by claim 1.

In response, regarding claim 1, the Examiner considers that Needham does disclose this limitation. Needham discloses a motion detecting algorithm as shown in figure 4. At step 33, a pixel comparison is made between the current frame and a previously captured frame, if the pixel comparison indicates that the number of pixels between the two frames not exceed a predetermined threshold, the flow chart goes to step 32 and step 36; step 36 is a determination of whether a stable image is detected. If image is not stable, the flow chart returns to step 31 to capture another frame; if image is stable (that means no motion), the flow chart goes to step 37, at step 37, the selected stable frame is uploaded to Web server for storing as a final image frame (column 5, lines 23-59). Noted that the claim does not specifically require where the final image is stored.

In re pages 8-9, Applicant argues that Needham does not disclose "converting said current image to be said previous image and repeating the steps of comparing and determining if said current image is not stable," as is required by claim 10.

In response, regarding claim 10, the Examiner considers that Needham does disclose this limitation. Needham discloses that step 36 is a determination of whether a stable image is detected. If image is not stable (that means there is motion), the flow chart returns to step 31 to capture another frame (converting said current image to be said previous image) and then goes to step 33 to compare difference between current frame and previous frame with a predetermined threshold (repeating the steps of comparing and determining if said current image is not stable), figure 4, column 5, lines 23-59).

In re page 9, Applicant argues that Needham does not disclose "storing the second image as a final," as is required by claim 21.

In response, regarding claim 21, the Examiner considers that Needham does disclose this limitation. Needham discloses that step 36 is a determination of whether a stable image is detected. If image is stable (that means no motion), the flow chart goes to step 37, at step 37, the selected stable frame is uploaded to Web server for storing as a final image frame (column 5, lines 23-59). Noted that the claim does not specifically require where the final image is stored.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, 3-5, 7-15, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by

Needham (US 6,803,945).

Regarding claim 1, Needham discloses an image capturing device, comprising:

an electronic image sensor (included in video camera, figures 3-4, column 5, lines 22-59);

a memory (included in video camera for operating flow chart in figures 3-4, column 3,

lines 35-59) including a motion detect routine, a predetermined image interval, and at least one

predetermined motion threshold; and

a processor (a processor, column 3, lines 35-43) communicating with said electronic

image sensor, a shutter button (included in video camera), said processor being configured to:

(a) comparing a second image to a first image, wherein the second image is captured after

the first image, to determine if motion between said second image and said fist image is below

said at least one predetermined motion threshold (comparing current frame and previous frame,

steps 31, 33, figure 4, column 5, lines 23-59),

(b) store said second image as a final image if the motion between said second image and

said first image is below said at least one predetermined motion threshold (steps 33, 32, 36, 37,

figure 4, column 5, lines 23-59),

(c) capture a third image and compare the third image with the second image to

determine if motion between said third image and said second image is below said at least one

predetermined if the motion between said second image and said first image is not below said

predetermined motion threshold (at step 33, if difference between current frame and previous

frame is larger threshold and frame is not stabled as determined in step 36, another frame will be

captured at step 31, figure 4).

Regarding claim 3, Needham discloses the processor is configured to compare a main

object of the second image with a main object of the first image to determine if motion between

said second image and said first is below said at least one predetermined motion threshold (step

33, figure 4).

Regarding claim 4, Needham discloses a number of regions data dividing a captured

image into a plurality of image regions and wherein a region-by-region comparison is performed

between two successive images (comparing pixel by pixel, column 4, lines 1-10).

Regarding claim 5, Needham discloses a motion detect variable (threshold, figure 4),

wherein a motion detection is performed when said motion detect variable is set to an enable

state (step 36, figure 4).

Regarding claim 7, Needham discloses the processor stores said current image as said

final image when said current image is determined to be stable (steps 33, 32, 36, 37, figure 4,

column 5, lines 23-59).

Regarding claim 8, Needham discloses the processor stores said current image as said final image when said current image is determined to be stable and the shutter button is detected (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59).

Regarding claims 9, 12, 23, Needham discloses a hold timeout timer that stores a predetermined hold timeout period and wherein said current image is stored as a final image if said hold timeout timer expires (time duration, column 4, lines 23-41).

Regarding claim 10, Needham discloses an image capturing method, comprising the steps of:

detecting a shutter button (included in video camera for capturing a current frame, figure 4) press in order to initiate the image capturing method;

capturing a previous image (capturing a previous frame, figure 4, column 5, lines 23-59);

capturing a current image (capture a current frame, step 31, figure 4, column 5, lines 23-59);

comparing said current image and one or more previous images (step 33, figure 4, column 5, lines 23-59);

determining if said current image is stable with regard to motion (step 36, figure 4, column 5, lines 23-59);

converting said current image to be said previous image and repeating the step of capturing a new image as said current image and repeating the steps of comparing and

determining if said current image is not stable (step 36 then step 31 and step 33, figure 4, column 5, lines 23-59);

wherein the step of capturing a current image and the steps of comparing and determining are repeated until said current image is determined to be stable (figure 4).

Regarding claims 11, 14 and 22, Needham discloses storing said current image as a final image (steps 33, 32, 36, 37, figure 4, column 5, lines 23-59).

Regarding claims 13, 24, Needham discloses the step of waiting a predetermined image interval between image captures (predetermined interval, column 3, lines 36-59).

Regarding claims 15, 25, Needham discloses wherein the step of comparing compares all pixels in said current image and in said previous image (column 4, lines 1-10).

Regarding claim 21, claim 21 is a method claim of apparatus claim 1. Therefore, claim 21 is rejected for the reason given in claim 1.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 2, 16-20, 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Needham (US 6,803,945) in view of Bell et al. (US 5,103,254).

Regarding claims 2, 16, 26, Needham fails to specifically disclose a predetermined

sampling pattern of pixels to be sampled in a captured image and wherein a comparison is

performed on pixels included in said predetermined sampling pattern. However, Needham

teaches a camera comprises motion detector 72 which detects motion by comparing desired

portions of the images (sampling pattern of pixels, column 5, lines 40-62). Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting

motion.

Regarding claims 17, 27, Needham fails to specifically disclose the step of comparing

compares a predetermined region in said current image and in said previous image. However,

Needham teaches a camera comprises motion detector 72 which detects motion by comparing

desired portions of the images (sampling pattern of pixels, column 5, lines 40-62). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the device in Needham by the teaching of Bell et al. in order to reduce time in detecting

motion.

Regarding claims 18-19, 28-29, Needham fails to specifically disclose the step of

comparing compares a user-designated region in said current image and in said previous image.

However, Needham teaches a camera comprises motion detector 72 which detects motion by

comparing desired portions of the images (sampling pattern of pixels, column 5, lines 40-62).
Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention
was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time
in detecting motion.

Regarding claims 20, 30, Needham fails to specifically disclose the step of comparing
compares a plurality of regions in said current image to a corresponding plurality of regions in
said previous image, and wherein said current image is determined to be stable when all regions
in said plurality of image regions are determined to be stable. However, Needham teaches a
camera comprises motion detector 72 which detects motion by comparing pixels in the first
outline with pixels in second outline (steps 150-152, figures 11a-11c, column 5, lines 29-62).
Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention
was made to modify the device in Needham by the teaching of Bell et al. in order to reduce time
in detecting motion.

6.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Needham (US
6,803,945).

Regarding claim 6, Needham fails to specifically disclose said predetermined motion
threshold is user-settable. However, Official Notice is taken that it is well known in the art to let
the user sets a desired threshold in determining motion. Doing so, the user can obtain desires
picture.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-

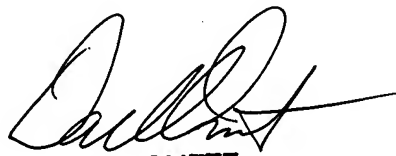7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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2/1/07

DAVID OMETZ
SUPERVISORY PATENT EXAMINER